

**UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

Solas OLED Ltd., an Irish corporation,

*Plaintiff,*

vs.

Samsung Display Co., Ltd., a Korean corporation,  
Samsung Electronics Co., Ltd., a Korean  
corporation, and Samsung Electronics America, Inc.,  
a New York corporation,

*Defendants.*

CASE NO. 2:19-cv-152-JRG

**JURY DEMANDED**

**PLAINTIFF SOLAS OLED (“SOLAS”) LTD.’S  
REPLY CLAIM CONSTRUCTION BRIEF**

For each of the disputed claim terms, Samsung seeks to burden clear claim terms with extraneous baggage, imported from examples in the specification or invented from whole cloth. These flawed and results-oriented constructions should be rejected, and Solas's constructions, which are faithful to the plain meaning and the intrinsic record, and supported by unrefuted expert analysis, should be adopted.

**A. "transistor array substrate" ('338 patent claim 1)**

Solas agrees with Samsung that the "transistor array substrate . . . comprises a plurality of transistors," as the claims plainly require. ('338 patent at 24:15–17.) Nothing in Solas's construction of "transistor array substrate" does or could change that requirement of the claims. Solas's construction expressly requires that the transistor array substrate have a "transistor array," either formed on the surface of the substrate or formed within the substrate. However, to the extent that the Court believes that the "comprises a plurality of transistors" limitation is not by itself clear and that the construction of "transistor array substrate" must also state that the transistors are part of the transistor array substrate, Solas would not object to such a clarification.

Samsung argues that the use of the word "is" in the sentence "[t]he layered structure from the insulating substrate 2 to the planarization film 33 is called a transistor array substrate 50" renders that sentence a definition of the claim term "transistor array substrate." But what the sentence is defining is "transistor array substrate 50," not "transistor array substrate." In other words, the specification is explaining what is contained in element 50 of the preferred embodiment, not offering a definition of the term "transistor array substrate" generally.

Moreover, in each of the cases Samsung cites finding that a sentence with the word "is" constituted lexicography, the term being defined was placed in quotes in that sentence. *Sinorgchem Co., Shandong v. Int'l Trade Comm'n*, 511 F.3d 1132, 1136 (Fed. Cir. 2007); *Medimmune, LLC v.*

*PDL Biopharma, Inc.*, No. C 08–05590, 2010 WL 653546, at \*6 (N.D. Cal. Feb. 22, 2010); *TriS-trata, Inc. v. Microsoft Corp.*, 594 Fed. App'x 653 (Fed. Cir. Dec. 4, 2014) (unpublished); *Alac-ritech, Inc. v. Century Link Comm'ns LLC*, 271 F. Supp. 3d 850, 868 (E.D. Tex. 2017). Also, each “is” sentence in these cases was a categorical statement, in contrast to the statement that Samsung relies on in the '338 patent that is expressly describing elements of a preferred embodiment. Likewise, in *Edwards*, the “i.e.” statement was categorical, as opposed to the “i.e.” statement of the '338 patent that is expressly limited to elements of the Figure 6 preferred embodiment. *Edwards Lifesciences LLC v. Cook Inc.*, 582 F.3d 1322, 1334 (Fed. Cir. 2009).

In *Sinorgchem*, the Federal Circuit noted that the use of quotation marks around a term is “often a strong indication” of lexicography. *Sinorgchem*, 511 F.3d at 1136. The Federal Circuit described the use of “is” as weaker evidence, which merely “may signify” lexicography. *Id.* Indeed, the source of the quotation used by Samsung that “‘is’ . . . may signify” lexicography was a case where the Federal Circuit found that “is” *did not* signify lexicography. *Abbott Laboratories v. Andrx Pharm., Inc.*, 473 F.3d 1196, 1210 (Fed. Cir. 2007) (finding no lexicography in the sentence: “The pharmaceutically acceptable polymer is a water-soluble hydrophilic polymer . . .”).

If Samsung were correct that the sentences at 10:45–47 or 11:50–53 of the specification *defined* “transistor array substrate,” then presumably the correct construction of the term would use the words of those definitions, e.g. “layered structure from the insulating substrate 2 to the planarization film 33.” ('338 patent at 10:45–47.) Tellingly, Samsung does not do so, offering instead a construction that adds words like “topmost” that never appear in the specification and that defines “transistor array substrate” in terms of elements—“electrodes” (or with Samsung’s latest revision, “pixel electrodes”)—that are not part of element 50 and are only *one of several* structures located directly on element 50 in the Figure 6 embodiment.

Solas’s proposed construction (with or without clarification) is fully consistent with the transistor array substrate being element 50 in the Figure 6 embodiment, and Samsung does not suggest otherwise. Rather, Samsung objects that there are other collections of layers in Figure 6 that might also satisfy Solas’s construction of “transistor array substrate.” Even if that were true, there is no requirement that a given claim element, in isolation, be mappable onto only a single structure or set of structures when properly construed. For example, the terms “plurality of transistors” or “plurality of light-emitting layers” (both used in ’338 patent claim 1) may—in isolation—be mappable onto all of the transistors / layers in a device or onto various subsets of the transistors / layers. There is nothing inappropriate with such terms.

For this term, and for the next two terms, Samsung relies on confidential pre-suit communications between Solas and companies it subsequently sued for patent infringement, seeking to convince those companies to take licenses to Solas’s patents. (Samsung Exs. 4–7.) In these communications, Solas pointed to figures in the ’338 as examples of the claimed inventions, which is not inconsistent with Solas’s claim construction positions.

Moreover, these communications are inadmissible under Fed. R. Evid. 408 for claim construction purposes, because the reason for courts to construe claims is that those constructions affect whether the claims are infringed and/or whether they are valid, i.e., that they affect the “validity . . . of a disputed claim” in the words of Rule 408. *Vanderlande Industries Nederland BV v. I.T.C.*, 366 F.3d 1311, 1322 (Fed. Cir. 2004) (Noting that mediation statement from a prior litigation would be inadmissible in district court under Rule 408, and that even though admissible under the ITC’s rules, 19 C.F.R. § 210.37(b), the evidence “was at most a theory advanced in a proceeding to mediate a separate litigation, upon which we place little—if any—weight in claim construction.”) Rule 408’s bar on admissibility is not limited to communications involving the parties in

suit. *Belton v. Fibreboard Corp.*, 724 F.2d 500, 505 (5th Cir. 1984) (settlements by co-defendants not admissible to prove liability or damages); *Lightfoot v. Hartford Fire Ins. Co.*, CV 07-4833, 2011 WL 13208961, at \*2 (E.D. La. Feb. 16, 2011) (“Rule 408 bars a third party not involved in the settlement from introducing evidence of a settlement that is excluded under Rule 408.”)

Samsung’s effort to limit this term with words like “topmost” and “upper” and with features like the [pixel] electrodes imported from the preferred embodiment should be rejected, and Solas’s construction, fully consistent with the specification and with the ordinary meaning of the words that make up the term, should be adopted.

**B. “project from a surface of the transistor array substrate” (’338 patent claim 1)**

Solas believes its proposed construction is clear, requiring that an element must “extend from a surface” of the transistor array, and not be “fully embedded inside the transistor array substrate,” as Samsung suggests. Solas believes that it is clear that the “surface” in its construction is an external surface of the transistor array substrate. However, if necessary to avoid the confusion reflected in Samsung’s brief or in certain questions asked at the deposition of Solas’s expert, Solas would not object to replacing the word “surface” in its proposed construction with “external surface.”

Samsung’s construction goes far beyond requiring that “surface” be an external surface. It seeks to replace the term “a surface” in the claims with “the upper surface.” None of the evidence supports limiting the term in this way. Samsung justifies its construction because the specification *sometimes* describes the interconnections as projecting from the “upper surface.” (*Contrast* ’338 patent at 10:54–58 *with id.* at 11:36–41.) But, this is simply disregarding the words of the claim “a surface” to import a feature from the specification “the upper surface” as a limitation.

Likewise, Samsung’s arguments concerning “partition walls” and “leakage” do not support its construction. Nothing in the actual claims refers to the interconnections serving as partition walls or preventing leakage. And nothing in the specification suggests that the interconnections must project from a specific “upper” surface in order to perform their (unclaimed) role of preventing leakage. (’338 patent at 6:24–30, 6:38–42, 12:62–13:3, 22:62–66.) Interconnections that project from the local surface of the transistor array substrate can serve as partitions on that surface, even if there may be some other “upper” surface elsewhere on the transistor array substrate.

Samsung’s improper effort to limit the claims should be rejected and Solas’s proposal “extend from a[n external] surface of the transistor array substrate” adopted.

C. **“the pixel electrodes being arrayed along the interconnections between the interconnections on the surface of the transistor array substrate” (’338 patent claim 1)**

As Solas explained in its opening brief, the ordering of and relationships among the prepositional phrases of claim 1 makes Solas’s proposed construction the most natural one. Samsung does not dispute this. Instead, Samsung argues that based upon the sequence of claim limitations “[t]he natural reading” of the “a plurality of pixel electrodes” limitation is that it describes the location of those electrodes both with respect to the interconnections and with respect to the substrate. But this is far from the “natural reading,” as none of the other limitations of claim 1 describes a location of particular elements with respect to *two* other elements. The location of the interconnections is described in terms of the transistor array substrate, the pixel electrodes in terms of the interconnections, the light-emitting layers in terms of the pixel electrodes, and the counter electrode in terms of the light-emitting layers. (’338 patent at 24:19–30.)

Samsung objects that Solas’s construction would render the “project from a surface” limitation superfluous, but that is untrue. As explained in Solas’s opening brief, “a plurality of interconnections which are formed to project from a surface of the transistor array substrate” is the

antecedent basis for the term “the interconnections on the surface of the transistor array substrate.” While references to antecedent bases such as this may make the claim repetitive, they do not mean that claim language is superfluous.

Samsung also objects that Solas’s proposed construction is inconsistent with “common interconnection 91” in Figure 6, which Samsung argues is not “on the surface of” the transistor array substrate. But, as the ’338 patent uses the term “on,” the entire stack of layers in Figure 6 is “on” the insulating substrate 2. (’338 patent at 8:21–23.) Using the word “on” in the same way as the specification does, both insulating line 61 *and* common interconnection 91 are “on” the surface of the transistor array substrate in Figure 6.

Samsung also points to settlement communications from Solas to LG Display concerning this claim limitation. But as explained above, these statements are inadmissible under Rule 408, and they would be entitled to little if any weight under the *Phillips* claim construction framework, even if they were admissible. *Vanderlande*, 366 F.3d at 1322.

**D. “write current” (’338 patent claim 1)**

Nowhere does the ’338 patent *define* “write current” as “pull-out current,” or state that the invention requires that it be a “pull-out current.” It is true, as Samsung notes, that the patent repeatedly uses the phrase “write current (pull-out current).” (Opp’n at 21–22.) But every use of that phrase appears under the heading “Display Panel Driving Method” (’338 patent at 14:40) in a section of the specification describing a “best mode” for the invention, which the patent expressly states “the present invention [is] not limited to” (*id.* at 4:42–48). As confirmed by the unrebutted opinion of Solas’s expert, one skilled in the art would understand that these uses of the phrase “write current (pull-out current)” are identifying an *example* of a write current, depicted in Figure 2 of the ’338, not providing a *definition* of “write current.” (Flasck Decl. (Ex. 1), ¶¶ 64–65.)

Samsung argues that there is “no disclosure in the ’338 patent of write current that is not pull-out current.” (Opp’n at 24.) But that would not justify limiting the claims to require “pull-out current.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1323 (Fed. Cir. 2005) (“although the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments”); *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004) (“Even when the specification describes only a single embodiment, the claims of the patent will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using ‘words or expressions of manifest exclusion or restriction.’”).

The uses of “i.e.” that Samsung points to do not *define* “write current,” as the *exact same phrase* “the current value of the write current (pull-out current)” appears on *both sides* of the “i.e.” in each instance. (’338 patent at 15:45–54, 16:50–59.) Rather, these sentences containing “i.e.” serve to explain that the current flowing to the signal lines at the time in question equals the current flowing through the driving transistor. (*Id.*)

Samsung argues that the patentee somehow limited the “write current” to be a “pull-out current” during prosecution. This argument grossly misreads the prosecution history. Samsung points to a change in claim language from “a switch transistor *which supplies a write current*” to “a switch transistor *which makes a write current flow*,” and argues that change was made “to overcome a prior art rejection.” (Opp’n at 25.) But that could not have been the reason for the change, as the original claim 2, containing the “which supplies a write current” version of the limitation had already been found to be allowable by the Examiner. (Rubin Decl., Ex. 6 at 12.) If anything, this change appears to have been intended to *broaden* the language of original claim 2, not to narrow it to a preferred embodiment, as any “switch” that “supplies” a current presumably also “makes” that current “flow.”



As explained by Solas’s expert and not rebutted by any evidence offered by Samsung, “write current” has a plain meaning in the context of the ’338 patent. (Flasck Decl. (Ex. 1), ¶¶ 61–62.) By contrast, “pull-out current” is not a common or well-defined term and is not defined in the ’338 patent. (*Id.*, ¶ 66.) Samsung’s brief offers no explanation of what a “pull-out current” is or how it differs from the plain meaning of “write current.”

Having no evidence to rebut them, Samsung disparages Solas’s expert’s opinions as *ipse dixit*. But, these opinions are grounded in the expert’s analysis of the description of the “write current” in the preferred embodiments of the ’338 patent and of the extrinsic evidence that was cited by Samsung in the joint claim construction statement (Dkt. 65, Ex. A at 6–7) but never mentioned in Samsung’s brief. (Flasck Decl. (Ex. 1), ¶¶ 20–22, 61, 62, 66.) They are no mere *ipse dixit*.

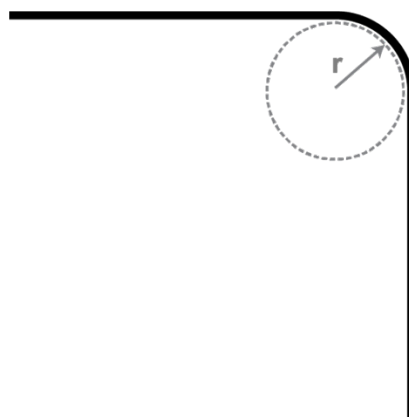
Samsung’s improper effort to limit the claims to a preferred embodiment should be rejected, and the fact-finder should apply this term in accordance with its plain and ordinary meaning.

**E. “configured to wrap around one or more edges of a display” (’311 patent claims 1 and 7)**

Samsung argues that the ’311 patent sets forth two sets of embodiments: (1) those wrapped around an “edge” and (2) those wrapped around a “curved surface,” and that only claimed the first set is claimed. In reality, the patent sets forth a range of embodiments, including wrapping around the specific edges shown in Figure 7 (’311 patent at 7:48–51), around wrapping edges with various radii (*id.* at 7:52–55), and wrapping around various “curved surfaces” (*id.* at 57–65). Nothing in the patent says that edges cannot be curved or that curved surfaces cannot have edges. To the contrary, the patent expressly describes embodiments that both have edges and are curved, i.e., the “sharper edges” with “radii of less than 1 mm.” (*Id.* at 7:52–55.)

Just as the specification does not set forth two mutually exclusive sets of embodiments—“edges” vs. “curves”—the amendment during prosecution that added this disputed term does not exclude embodiments that wrap around “curved surfaces.” The purpose of this amendment was to overcome a prior art reference called *Hotelling*. (Samsung Ex. 9, ’311 file history at 17.) In rejecting the claims, the examiner pointed to “flex circuits . . . on either side of the sensor panel” that connected traces at the “edge” of one side of the substrate to traces at the same “edge” on the other side of the substrate.” (*Id.*) In other words, *Hotelling* had “edges,” but it was distinguished in that it did not have a substrate or sensor configured to wrap around edges. (*Id.*) Nothing in the file history cited by Samsung suggests that the patentee excluded edges on “curved surfaces” to obtain its claims.

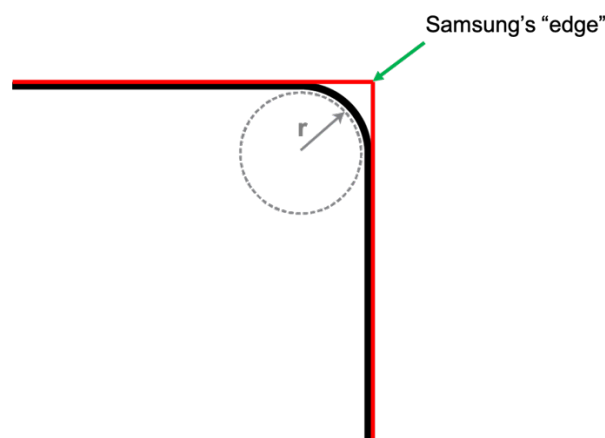
Even if Samsung were right that the claims exclude preferred embodiments with “curved surfaces,” Samsung’s proposed construction excludes preferred embodiments that are expressly described as having “edges,” and is thus improperly narrow. For example, the patent describes “sharper edges (e.g., with radii of less than 1mm)” between “flat portions of surfaces.” (*Id.* at 7:52–55.) Viewed along the length of such an edge, this arrangement would look like the following:



Here the vertical and horizontal line segments are the “flat portions of surface” viewed end on, and the curved portion between them with radius of curvature  $r$  is the “edge” that the sensor of this embodiment wraps around.

Under Samsung’s construction, however, the sensor does not wrap around the “edge.” Rather, Samsung’s construction requires finding “line segments where two surfaces of a display intersect.” Samsung argues that these “surfaces” cannot be curved and indeed bases its construction on a dictionary definition that requires that they be “plane faces.” (Opp’n at 28.)

The only way to find a line segment where the two flat surfaces of this embodiment intersect is to extend the flat portions, as shown in red below, to where they intersect in a line segment yielding a new “edge” that is outside of the actual device:



But the sensor in this embodiment wraps around the edge with radius  $r$ , following the heavy black path. It does not wrap around the line segment of intersection between the flat surfaces, as required under Samsung’s construction.

Samsung’s construction, which is based upon misreading of the specification and file history and which excludes preferred embodiments that have “edges” must be rejected, and the finder should apply this term in accordance with the plain and ordinary meaning of “wrap around one or more edges.”

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Respectfully submitted,

/s/ Reza Mirzaie

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### **CERTIFICATE OF SERVICE**

The undersigned certifies that on March 11, 2020, all counsel of record who are deemed to have consented to electronic service are being served with a copy of this document via the Court's CM/ECF system pursuant to Local Rule CV-5(a)(3)(A).

/s/ Reza Mirzaie  
Reza Mirzaie